STATE OF COLORADO
Department of State
1700 Broadway
Suite 250
Denver, CO 80290

Mike Coffman
Secretary of State

Holly Z. Lowder
Director, Elections Division

Testing Board
Members and Qualifications

Timothy Bishop

Expertise: Elections & Technology

Education

- Pikes Peak Community College, Computer Science and Information Technology Certificate (1985)
- Associate of Applied Science degree, Networking Technology (Accumulated 127.33 hrs, with CCNA course completion; overall GPA is 3.725)

Summary of professional experience (some information, including employer, may have been omitted for security reasons)

2006 – Present - Voting Systems Technician, Colorado Secretary of State

- Assists the Department of State's Voting Systems Specialist to administer the Colorado voting system certification program.
- Reviews Independent Test Authority test results and assists with Colorado-specific testing prior to providing formal recommendations on certification to the Secretary of State.
- Prepares reports for the Voting Systems Specialist to provide communication of certification results to the voting system vendor and Colorado county election officials.
- Monitors and participates in county voting system testing processes.
- Maintains an on-line database of county voting systems, incorporating necessary rules and law, as applicable.
- Provides training and support to end-users of the systems, including counties and municipalities, throughout the election cycle to troubleshoot problems and provide general support on voting systems.

2002 – 2006 - Systems Specialist, El Paso County Clerk and Recorder

- Installed, upgraded, and maintained personal computer hardware, software, peripherals, networks, and related equipment to comply with county standards for efficiency, compatibility and security, ensuring compatibility with any applicable federal, state, county and/or departmental requirements.
- Analyzed design to determine requirements for program enhancements or modifications for multi-department systems. Monitored changes necessary to adapt from an existing system or process to a proposed system, facilitating any required conversions.
- Constructed required materials, including ballots, ensuring correct layout and combination assignments as determined by the various precincts, issues, and political races.
- Converted ballots to electronic media suitable for printing, and assisted in the programming, testing, upgrading and troubleshooting of the PC-based Elections system.
- Coordinated with the Information Systems Manager and appropriate Information Technologies staff for any necessary web page and or Internet Interfaces.

2001 – 2002 - PC/LAN Analyst, Minco Manufacturing

- Supported, monitored, tested and troubleshot hardware and software problems pertaining to LAN, providing end-user support for all LAN-based applications.
- Maintained and configured router, server and hubs for LAN and WAN.

1999 – 2001 - Production Control Supervisor, Xpectra, Maxcor, Inc.

- Established and supervised the production schedules in a factory environment, ensuring the flow of materials, parts and assemblies between and within departments.

1994 – 1998 - Owner & Operator, S & T RC Raceway

- Performed all aspects associated with the operation of a small business.

Michael Chadwell

Expertise: Technology

Education

- Engineering Statistics. Employer Charter Course. 1997.
- Statistics/Design of Experiments. Employer Charter Course. 1995.
- Applied Mathematics. Metro State/C.U. Denver, CO. 1986 – 1988.
- Supervisory Development Series. Red Rocks Community College, CO. 1986.
- Architectural Design. Mission Viejo Community College, CA. 1979.

Performance Awards & Commendations

- *Meritorious Achievement award* with parallel promotion from Exabyte engineering for the volunteer development of COMDEX demonstration firmware for next generation product development.
- *Outstanding Quality award* from Q-Tronix for consistently exceeding quality and quantity goals.
- Three-time military *Meritorious Commendation* recipient.

Supplemental Skills & Qualifications

- Experienced with Basic, Assembly, C/C++, Visual Basic and proprietary scripting/macro programming languages, in modifying both SCSI/ATAPI test programs and firmware level Servo Motion Control diagnostics, COMDEX demos, robotic test platforms and X-Y stage measurement apparatuses, as well as text based test log file parsing programs. Using programming skills, developed custom embedded and SCSI host level application emulation and mechanical evaluation and reliability algorithms, enabling relief for programmers in critical path queues.
- In-depth firmware command and functionality debugging. Support tools experience includes code version control (PVCS and ClearCase), and defect tracking databases (Access, Excel and web based BugTracks).
- Experienced in Mechanical Concept and Evaluation Fixture Design employing plate models, discrete and PAL based state machines, analog and digital support circuits.
- Experienced with subassembly, (motors, wear surfaces, transport element analysis), qualification and specification testing, including detailed Failure Analysis and Corrective Action studies.
- Experienced in a wide variety of mechanical measurement instrumentation, including load cells, strain gages, transducers, indicators, thermocouples, data loggers, environmental chambers.
- Experienced in a wide variety of electrical measurement instrumentation, including DMM, oscilloscopes, logic analyzers, TIA's, DMA's, multi-protocol interface bus analyzers and software based data acquisition systems.

- Experienced with many of the typical business and programming software packages: DOS, MS-Windows, MS-Office, flow charting, and some CAD (AutoCAD for plate models, OrCAD for schematic design).

Summary of professional experience (some information, including employer, may have been omitted for security reasons)

2004 – 2006 - Managing Partner: Business Strategy and Product Technology, Unregistered (business in planning)

- Mail order/e-business based, multi-partner enterprise focused on the acquisition, evaluation, design enhancement and supply of mid-level through high-end and custom esoteric competitive sport devices and services.

1997 – 2004 - R&D Product Design Analyst: Firmware Command Set Interface & Test Case Use Modeling, Hewlett-Packard (indirect)

- Implemented a multidiscipline pre-qualification use model emulation methodology to consolidate the feasibility assessment through pre-production development cycle efforts thereby significantly reducing downstream restart resources and costs during the qualification phases as a function of device design.
- Imbedded Control Systems Interface development pre-qualification assessment and debug of implementation, compliance and stability of CD-R/RW and DVD+R/RW recorder devices employing SCSI, IDE, ATAPI, PCMCIA, USB and 1394 interface protocols.
- Development of test plans, test cases and test tools for Use Model emulation/debug, implementation, support and offshore supplier-site test tools training and testing methods consulting to partnered engineering teams.
- Device based, software driven parametrics qualification tools development (C++ & pseudo-Basic) for Media Lab.
- Technical interface between supplier engineering teams, development groups and qualification labs.
- Walk-in ad hoc testing and on-call failure analysis services.

1987 – 1996 - R&D Mechanical Design Analyst: Mechanisms & Servo, Exabyte Corporation

- Circumvented cross-functional critical path obstacles by integrating multidiscipline engineering skills to contribute to time-to-market efforts, functional quality improvement and process cost reductions.
- Developed tape device firmware (ASM) and SCSI host level (C/C++) mechanical evaluation algorithms.
- Testing of prototype designs for function, specification reliability and margining, and serviceability.
- Compile and publish test criteria and data in the form of test plans, status updates, and final reports.
- Acquire or develop test software/firmware to emulate functions in a controlled simulation.
- Integration testing of released designs into customer specific platforms.
- Applied expertise across variant data tape devices inclusive of 8mm, 4mm and Quarter Inch formats.
- Served as engineering resource for establishing apparatus methods for OEM/field integration performance verification studies.
- Regarded internally as the corporate “Deck Doctor” for mechanical function issues.

1985 – 1987 - Prototype Assemblies/Rework Technician, Ampex, Switcher Division

- Support new product development efforts and in-process system level rework.

1984 – 1985, Operations and Quality Manager, Q-Tronix, Inc.

- As an Ops/QC manager, improved overall operational doctrine resulting in record setting gains in gross revenues while substantially reducing operational costs, while optimizing customer need driven solutions.
- Senior organizational manager of Production and Quality Control departments, Accounts Receivable and new account bids.

- Restructured operational standards using an optimized integration of resources, process, quality, and individual customer requirements.
- Established a customer Quality Options Matrix to better meet customer requirements within effective process capabilities and costs.

John Gardner

Expertise: Elections & Technology

Education

- Executrain Colorado - Colorado Springs, CO, MCP Certification - Windows NT 4.0
- Montana State University - Bozeman, MT, Bachelor's of Architecture
- University of Miami - Coral Gables, FL, Architectural Studies - CADD Certification

Summary of professional experience (some information, including employer, may have been omitted for security reasons)

2005 – Present Voting System Specialist(Colorado Secretary of State)

- Manages a team of 4 direct reports that assist with project implementation, training, support, programming,
- Acquisition, research, certification and development of voting systems.
- Responsible for creating requirements for voting system security including network and operating system security.
- Reviews and provides support for Colorado counties security procedures for handling voting equipment.
- Works closely with NIST and other federal agencies regarding standards and requirements for voting system use and implementation.

2001 – 2005 Information Systems Manager (El Paso County Clerk & Recorder)

- Manages a team of 6 direct reports that assist with project implementation, training, support, programming, acquisition, research and development.
- Responsible for ensuring the efficiency, compatibility, security, and State regulations of all application software and computer systems within the Clerk and Recorder's office.
- Coordinates and plans the programming, ballot order, training, and deployment of all equipment and technology related to conducting and tabulating elections for El Paso County.
- Frequent Project Steering Committee member, or coordinator for various system implementations.

1997 – 2001 Director of Information Services (The Larson Group, Inc.)

- Responsible for Implementing, supporting, and acquiring all technology for Colorado office, plus 3 branch offices in California, Illinois, and Georgia.
- Coordinate with various vendors and service providers for warranty, support, maintenance, contracts, and development of Hardware and Software.
- Training Coordinator and Drafting Standards creator/editor for Architects, and Draftspersons.

1995 – 1997 Information Systems Technician Dept. of Transportation, State of Montana

- Help Desk Support Team member supporting more than 2000 users in 45 locations throughout the state.
- Coordinate and execute Maintenance contract with various vendors for laptop Acquisition and Repair.

- Worked with System Administration Team to implement Department standards for system acquisition and deployment throughout State.

Bernard Konkol

(Note: Mr. Konkol was a member of Testing Board through Phase II, document review, and the initial stages of Phase III, dealing with the Trusted Build)

Expertise: Technology

Education

- 2002, Measurement Uncertainty Certificate
- 1985-1986, Antelope Valley College, Fortran 7, I & II
- 1976-1977, Antelope Valley College, Electronics, Math & General Education
- 1975, USAF Extension College, 32851 Avionics Navigation Systems Specialist
- 1974-1975, USAF Avionics Systems School , 32831 Avionics Navigation Systems Specialist
- 1974, USAF Basic Electronics School, Basic Electronics

Summary of professional experience (some information, including employer, may have been omitted for security reasons)

2002 – 2005 - Electronic Research Analyst

- Design, fabricate and execute destructive and non-destructive tests to validate hardware intended for space operations.
- Activities include testing at both operational and non-operational conditions, at levels of vacuum, temperature, humidity, pressure and strain.
- Activities also include the assembly and testing of prototype systems requiring troubleshooting and rework of both mechanical and electrical systems.

2000 – 2002 - Instrumentation Supervisor

- Oversee design, implementation & function of Data Acquisition Systems at a 150+ acre testing facility.
- The team consisted of 2 Engineers, 1 Programmer and 4 Technicians.
- Using National Instruments LabView software and Field Point, SCXI and DAQ hardware to record fast and slow data that includes pressure, strain, temperature, humidity, flow, g-level, speed, acceleration, voltage and current during testing.

1995 – 2000 - Prototype Engineering Liaison

- Responsible for the successful transition of engineering designs into production phases of program, primarily: fit checks, verification testing, qualification testing, work instructions and test instructions.
- Served as a member of the Supplier Development Team and Material Review Board and as required served as Program Manager on prototype systems.
- Provided technical guidance and training to Assembly/Test Technicians as required.

1983 – 1995 - Systems Test Engineer

- Initiate and write checkout procedure, both automated and manual, that ensures tractability to engineering requirements.

- Automated procedures were written in Atlas Programming Language for MIL 1553 data buss.
- Manual procedures included servicing, ground handling and scheduled maintenance activities to ensure the continued safety of the aircraft.
- Conducted automated checkout of each production aircraft and provided detailed troubleshooting, repair/replace instructions to restore the systems to normal operating condition.

Geneice Mathews
(Note: Ms. Matthews is not involved and will have no impact on the certification process of Sequoia Voting Systems, Inc.)

Expertise: Technology

Education
- Bachelor of Arts in Political Science and German, Longwood University, Farmville, Virginia
- Course work in Computer Programming, College America, Denver, Colorado
- Certificate of the American Council on the Teaching of Foreign Languages (ACTFL)

Summary of professional experience (some information, including employer, may have been omitted for security reasons)

2004 – 2007 - Operations Product Specialist/Account Manager, Sequoia Voting Systems, Inc.
- Responsible for system demonstrations to state and county level executives.
- Co-organized Focus Group Testing on company products.
- Coordinated services and technical training nationwide to premier accounts.
- Created and conducted customized training and documentation for key accounts.
- Managed key accounts and services.
- Provided technical, tally and hardware support for major elections nationwide.
- Responsible for training of Product Specialists and Quality Assurance Technicians.
- Applied understanding and knowledge of the election processes to solve unique customer problems, implementation of Sequoia products and services for best fit.

2002 – 2004 - R&D Product Specialist, Sequoia Voting Systems, Inc.
- Technical lead for international and domestic projects.
- Organized and managed federal and state Sequoia system product certifications.
- Coordinated new systems implementation in conjunction with project management.
- Prepared and updated documentation for newly released product development.
- Served as technical reference for accuracy in the response preparation process for Request for Proposals.

2001 – 2002 - Quality Assurance Technician, Sequoia Voting Systems Inc.
- Responsible for troubleshooting election software and equipment systems, and resolving technical issues.
- Extensive experience with Visio, Microsoft Office, DOS and SQL in testing, recording and analyzing software and hardware issues.
- Responsible for training of Quality Assurance Technicians on proprietary database software and hardware
- Supported and created state-specific election programs for sales demonstrations nationwide.
- Organized and characterized test data sets for software testing.

2001 - Quality Assurance Technician, iBeta Quality Assurance

- Analyzed software prototypes to create specialized data sets per Program Specification Documents.
- Deciphered PSD's to design detailed black box testing processes for company quality assurance testers.
- Developed new approaches to solve problems identified during quality assurance activities.
- Prepared reports to communicate involvement and results of quality assurance activities.

1999 – 2000 - Marketing & Programs Manager, Communications World International

- Organized and conducted telecommunications trade shows, seminars and vendor meetings for new telephone product review.
- Planned and organized bi-yearly Communications World nationwide franchise group dealer meetings.
- Developed end user marketing collateral and brochures for both products and services; including writing copy, identifying key selling features and competitive comparisons.
- Trained newly hired dispatchers on proprietary database software used to track client accounts, orders and service.

Danny Casias

Expertise: Technology

Education:

- B.S. in Electrical Engineering, focus on microwave technology. University Of Utah, Salt Lake City, UT, June 1980

Supplemental Skills and Qualifications:

- Fundamentals of Systems Engineering.
- Program Process Standard (PPS) Module, LMCO.
- Engineering Methodology Course, LMCO.

Summary of professional experience (some information, including employer, may have been omitted for security reasons)

Sept. 2004 – January 2006
Member of Aerial Common Sensor SIGINT Integrated Product Team Lockheed Martin Integrated System & Solutions

- Updated Statement Of Work (SOW) documents to define specific tasks to be performed and CDRL items to be delivered for ELINT receivers and RF Distribution subsystem.
- Reviewed, comprehended, and provided feedback to the authors on the program plans that determine how the ACS program was to be managed.

June 1980 – Jan. 1999
Engineer for Several Projects/Areas Lockheed Martin Astronautics

- Provided in depth technical oversight for an electronic surveillance system, consisting of microwave LNA assemblies, a frequency conversion subsystem, pulse receivers, and a CW receiver.
- Interfaced with other Program IPTs, Customer representatives, and the Subcontractor to ensure that the requirements and performance supported the mission objectives.
- Developed electronic surveillance system architectures in support of proposal activities.
- Developed UHF, microwave, millimeter wave, and laser communications systems architectures in support of Customer studies.
- Performed link analysis trade studies to optimize antenna size, transmit power, signal-to noise ratio (SNR), and bit error rate (BER) given unique size and weight constraints.
- Investigated several modulation types and error detection/correction methods.
- Responsible for the cradle-to-grave development, integration, test, and delivery of a ground based signal distribution system, which included RF/microwave front end assemblies and a multi-input, multi-output non-blocking switch matrix.

- Performed end-to-end analyses to allocate gain, noise figure, and output power to the various components to meet the Customer's sensitivity (G/T) and dynamic range requirements at multiple receiver inputs.
- Designed, built, and tested an Automatic Gain Control subsystem, consisting of RF amplifiers, digitally controlled variable attenuators, RF detectors, and power and control circuitry.
- ELINT Receiver Development.
- Provided technical oversight for the development of the test program and the delivery of the Instantaneous Frequency Measurement Units.
- Reviewed engineering drawings, test procedures, test plans, and test software to ensure that each IFMU met the Procurement Drawing specifications.
- Responsible for integration and test of an IRAD developed microwave Crystal Video Receivers (both breadboard and brassboard) which measured Time of Arrival, Pulse Width, and Pulse Amplitude. Responsible for characterizing the performance (versus input power, RF bandwidth, and video bandwidth), comparing the performance against the software model, and updating the model as necessary.

Jerome Lovato

Expertise: Technology

Education:

• B.S. Electrical Engineering, May 2001. University of Colorado, Denver, CO.

Summary of professional experience (some information, including employer, may have been omitted for security reasons)

1/07 – 4/07
Field Engineer (Contractor) ISEE Corp. Universal

- Provide technical support to customers, train customers on how to install/update mobile DVR systems, troubleshoot products, perform quality assurance, compose test procedures /"how to" guides and demo product to potential customers.

11/05 – 5/06
Product Engineer HID Corporation

- Support the design and build of RFID readers namely the RP40 Multi-Class Reader.
- Compose build and test instructions for the RP40, and verify that it is manufactured properly.
- Research BOM's, interact with suppliers to obtain components for testing and keep component database and Approved Vendor List current to ensure that all products comply with RoHS (Restriction of Hazardous Substances) standards.

4/05 – 11/05

Engineering Consultant (Contractor) Valleylab

- RoHS Team Lead. Research BOM's to determine whether our products meet RoHS standards, interact with suppliers to obtain components for testing, compose protocols for component verification and part numbering, create component database and train coworkers on how to use the Agile PLM Database.

5/01 – 11/04
Sustaining Engineer, EchoStar Technologies Corporation

- Support HW projects from concept to obsolescence, document design and Bills of Materials for configuration control and use by contract manufacturers, work with various departments (Software Engineering, Logistics, QA, Mechanical Engineering, Service) and contract manufacturers to ensure that the requirements used to build and maintain products have been met, train new Sustaining Engineers, test and troubleshoot products, compose test procedures/reports and review test reports submitted by Hardware Test and Engineering Test Service Groups.
- Projects supported: UHF & FSK Remote Receivers/Transmitters, Switches, LNBF's, Front End Tuners, DVR (Digital Video Recorder) Receivers, Smart Cards and DISH Antennae.